

# Charlotte: Scientific Modeling and Simulation Under the Software as a Service Paradigm, Phase I

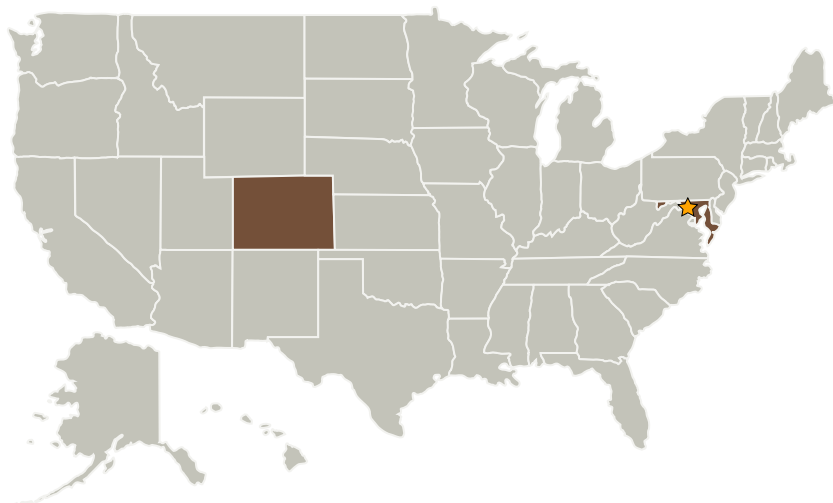
Completed Technology Project (2009 - 2009)



## Project Introduction

NASA spends considerable effort supporting the efforts of collaborating researchers. These researchers are interested in interacting with scientific models provided by NASA and they are located throughout the world. The process of distributing legacy research codes to this disparate group of researchers and assisting them with the compilation of these codes is time consuming and therefore costly. The proposed innovation would allow users to interact with these models using a modern, familiar web-based application interface. Functionality such as the editing of input conditions, interaction with supercomputing queues, monitoring of code progress, and accessing of results would all be provided through web services. The web application would interact with these web services based on user input from a variety of controls. The architecture is based on the paradigm of Software as a Service and similar to technologies underlying state of the art web applications such as Google Maps. As such it represents a huge advancement from the traditional approach of distributing legacy codes and dealing with compilation issues with varying hardware and operating systems.

## Primary U.S. Work Locations and Key Partners



Charlotte: Scientific Modeling and Simulation Under the Software as a Service Paradigm, Phase I

## Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Management	2
Technology Areas	2

## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Center / Facility:

Goddard Space Flight Center (GSFC)

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

## Charlotte: Scientific Modeling and Simulation Under the Software as a Service Paradigm, Phase I

Completed Technology Project (2009 - 2009)



Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
Tech-X Corporation	Supporting Organization	Industry	Boulder, Colorado

## Primary U.S. Work Locations

Colorado	Maryland
----------	----------

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

**Principal Investigator:**

Daniel Karipides

## Technology Areas

**Primary:**

- TX11 Software, Modeling, Simulation, and Information Processing
  - └ TX11.4 Information Processing
    - └ TX11.4.4 Collaborative Science and Engineering